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TITLE : PATTERN FORMING MATERIAL FOR ELECTRON BEAM IRRADIATION

ABSTRACT : PROBLEM TO BE SOLVED: To enable microfabrication having high resolution and a high aspect ratio by a lithographic method using electron beams by forming a thin film layer made of a fullerene on a substrate.

SOLUTION: The thin fullerene film layer is formed on the substrate of a silicon wafer or the like and this fullerene is embodied by a 60C soccer ball type and a 70C rugby ball type, preferably, the 60C soccer ball type. The thin fullerene film can be formed on the substrate by a vacuum deposition method and a sputtering method, or a method comprising dissolving the fullerene in a suitable solvent to prepare a coating solution and coating the substrate with a spinner or the like and drying it. The thickness of the thin fullerene film layer is usually in the range of 1-100 nm, and this layer is irradiated with electron beams in accordance with a prescribed pattern form, and then, subjected to development processing with an organic solvent, such as benzene.